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**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/917,480 08/26/97 WAKAYAMA

S	R <sup>8767</sup> EXAMINER
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PM82/1024  
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ART UNIT	PAPER NUMBER
DIPT, I	

DATE MAILED:  
3644

10/24/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

08/917,480

Applicant(s)

Wakayama

Examiner

T. Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 24.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3644

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 6, 16, and 18, "the bending moment" lacks antecedent basis.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-15, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashkenas in view of Whitener.

Ashkenas discloses a blended delta shape wing aircraft that is tail-less with independently control surfaces located at stall-critical spanwise locations but is silent on the control surface configuration system in which the control surfaces are selectively reconfigurable to a plurality of predetermined positions as required to optimize the

Art Unit: 3644

spanwise force distribution across the wing for each of a plurality of different flight configurations/conditions including a low speed flight condition in which a first selected ones of the control surfaces are positioned to increase a local coefficient of lift and the other control surfaces are positioned to control pitch trim. However, Whitener clearly shows that control surface configuration system in which the control surfaces are positioned at predetermined positions for certain flight configurations are well known in the art. The control surfaces are independently controllable to increase lift and controlling pitch trim if desired.

It would have been obvious to one skilled in the art at the time the invention was made to have used control surface configuration system in Ashkenas' system as taught by Whitener to increase the maneuverability of the aircraft and to prevent detrimental effects on the aircraft. Please note that at a certain predetermined positions, it is inherent that spanwise force distribution across the wing is optimized since this would obviously optimize the maneuverability of the system. The control surfaces of Askenas control the shapes of the wing and the moving air on the surface of the control surfaces to generate "forces" to control flight and reduces hazardous conditions that is detrimental to the aircraft. This could include maximizing the lift to drag ratio, reduce a moment on the wing, etc. Please note that the methods as claimed is met by the apparatus of Ashkenas as modified by Whitener.

Art Unit: 3644

Claims 6, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashkenas as modified by Whitener as applied to claims 1 and 11 above, and further in view of Lewis.

Ashkenas as modified by Whitener discloses all claimed parts of the invention (including pitch maneuver) but is silent on the use of the control flaps on reducing bending moment with respect to a bend axis of a wing. However, Lewis discloses that the use of control surfaces to reduce bending moments on the wing is well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have allowed/given the system of Ashkenas the ability to reduce bending moments as taught by Lewis to prevent damages to the aircraft. Re claim 18, please note that during a pitch maneuver of Ashkenas' aircraft, it is inherent that the control surfaces are used to shift the spanwise distribution towards the longitudinal axis without reducing the lift force since the loss of lift forces would make the aircraft "fall" below where it is needed to be. Thus, it is desired that the control surfaces prevent the loss of lift to the aircraft so it could fly.

### ***Conclusion***

Art Unit: 3644

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ryle and Razak disclose control surfaces used for different maneuvers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. Dinh whose telephone number is 703-308-2798. The examiner can normally be reached on Monday Through Friday 8-6, alternate Monday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan can be reached on 703-306-4159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

T. Dinh  
Examiner  
Art Unit 3644

TD  
October 19, 2001

*T. Dinh*  
*clerk*